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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/821,565	Applicant(s) ZHANG ET AL.	
	Examiner Khai N. Nguyen	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2007.
- 2a) ☒ This action is **FINAL**:                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>November 16, 2007</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's amendment filed on November 15, 2007 has been entered. Claims 1, 14, and 21 have been amended. No claims have been canceled. No claims have been added. Claims 1-25 are still pending in this application, with claims 1, 14, and 21 being independent.

### *Claim Rejections - 35 USC § 101*

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 3-4, and 15-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 3-4, and 15-16 recite **logic** for applying pre-paid call processing and ring-back tone processing, and therefore these claims did not fall within at least one of the four enumerated categories of patentable subject matter recited in section 101 (i.e., process, machine, manufacture, or composition of matter).

Similarly, method claims 1-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Method claims (1-20) according to the specification (**page 10 lines 19-21**) can be implemented "in a form of

software". Therefore, these method claims are interpreted as software claims which are non-statutory.

***Claim Rejections - 35 USC § 102***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-2, 4-8, 11-15, and 17-25 are rejected under 35 U.S.C. 102(b) as being anticipated by McConnell et al. (U.S. Patent Number 6,373,930 hereinafter "McConnell").

Regarding claim 1, McConnell teaches a method for setting up a call to a subscriber station (Fig. 4) comprising:

receiving a first request (Fig. 4, Fig. 9 (part A), 264) to set up a call from a calling number (Fig. 4, 102) to a called number (Fig. 4, 144) of a subscriber station, the first request carrying the calling number and the called number (col. 18 lines 15-25, see Fig. 4, 116, 120, col. 11 lines 13-14, i.e., service node or "IP", and col. 18 lines 60-66 i.e., SCP sends message to service node "IP"(e.g., SentToResource message));

processing the first request at a service node (Fig. 4, 120, Fig. 9, part A, 266-278) and providing, from the service node, a second request (Fig. 4, 120, Fig. 9 (part B), 280) to set up the call to the called number of the subscriber station, the second request

including the calling number, the called number, and a non-loop parameter (Fig. 4, 102, 110, Fig. 7, col. 14 lines 1-16, i.e., service code "87" in the dialed digits can be used for redirected to the dialed digits number ( service code "non-loop parameter")) to indicate that call setup signaling has already occurred to the service node and thus to help avoid endless looping of call setup signaling to the service node (Fig. 9 (part B), 280, col. 19 lines 42-52, and col. 22 lines 7-17, i.e., redirection parameters can be used to indicate that call setup signaling has already occurred (IS-41 RedirectionDirective operation, it is old and well known in the art that the RedirectionDirective operation contains RedirectingNumber parameter);

receiving the second request at a switch (Fig. 9 (part B, 300), and responsively sending a service request including the non-loop parameter to a service control point (Fig. 9 (part B), 300, col. 20 lines 19-29; and

detecting the non-loop parameter at the service control point and, in response to at least the non-loop parameter, directing the switch to set up the call to the subscriber station (Fig. 9 (part B), 302-304, col. 20 lines 30-35).

Regarding claims 2 and 15, McConnell teaches the method wherein processing the first request or applying the service logic in the SN (Fig. 4, 120) comprises applying pre-paid call processing logic (Fig. 4, col. 11 lines 12-21).

Regarding claims 4 and 17, McConnell teaches the method wherein the second request comprises an Integrated Services Digital Network User Part (ISUP) Initial

Address Message (IAM) (Fig. 9 (part B), 280, col. 19 lines 42-43), and wherein the non-loop parameter comprises predefined digits included in a ReDirectingNumber parameter of the ISUP IAM (col. 3 lines 12-22, and col. 22 lines 7-17, i.e., IS-41

RedirectionDirective operation, it is old and well known in the art that the RedirectionDirective operation contains RedirectingNumber parameter)).

Regarding claims 5, and 7-8, McConnell teaches the method wherein the ISUP IAM is mapped to a Signaling System 7 (SS7) message in accordance with the Wireless Intelligent Network (WIN) IS-771 standard, and wherein the non-loop parameter is mapped to a WIN parameter in the SS7 message (Figs. 1-4, col. 4 lines 17-37, i.e., Interim Standard IS-771).

Regarding claims 6 and 18, McConnell teaches the method wherein the second request comprises an Integrated Services Digital Network User Part (ISUP) Initial Address Message (IAM) (Fig. 9 (part B), 280, col. 19 lines 42-43), and wherein the non-loop parameter comprises predefined digits included in an Original Called Party Number parameter of the ISUP IAM (col. 3 lines 12-28, i.e., IAM message provide address information "such as the dialed number" – it is old and well known in the art that Dialed Number or Called Party Number is the same).

Regarding claims 11-12, McConnell teaches the method wherein receiving the first request at the switch comprises receiving the first request at a mobile switching

center (Fig. 4, 110, col. 8 lines 60-62), and wherein receiving the first request at the switch comprises receiving the first request at a public switched telephone network switch (Fig. 9, 250, and Fig. 4, 104, 110, 113 PSTN, 144, col. 18 lines 15-22).

Regarding claims 13, 19-20, McConnell teaches the method further comprising generating one of an Advanced Intelligent Network (AIN) trigger (Fig. 1, "AIN", col. 2 lines 25-30, and lines 44-52, i.e., AIN trigger points) and a Wireless Intelligent Network (WIN) trigger (Fig. 1, col. 7 lines 30-55, i.e., WIN triggers to facilitate prepaid service) in response to receiving the first request and, as a result, generating a query for seeking call processing guidance from the service control point (Fig. 1, col. 7 lines 60-67, and col. 8 lines 1-12, i.e., SCP provides call processing guidance).

Regarding claim 14, McConnell teaches a method for setting up a call to a subscriber station (Fig. 4, 102, 144) comprising:

at a telecommunications switch (Fig. 4, 110), receiving a first request to set up the call from a calling number (Fig. 4, 102) to a called number (Fig. 4, 144) of the subscriber station (Fig. 4, col. 8 lines 60-62);

responsive to the first request, sending, from the switch (Fig. 4, 110) to a service control point (SCP) (Fig. 4, 124 SCP), a first query seeking call processing guidance (col. 8 lines 62-65);

at the switch (Fig. 4, 110), receiving, from the SCP (Fig. 4, 124), a response to the first query directing the switch to set up the call to a service node (SN) (Fig. 4, 120, service node or "IP", col.11 lines 12-15, i.e., service node "SN", and col. 9 lines 1-10);

at the SN (Fig. 4, 120), applying service logic and providing, to the switch, (Fig. 4, 110) a second request to set up the call to the subscriber station, wherein the second request comprises the calling number, the called number, and a non-loop parameter (Fig. 7, col. 3 lines 25-28, i.e., IAM message provides calling number, called number and other parameters "non-loop or service code") to indicate that call setup signaling has already occurred to the SN (Fig. 4, 120) and thus to help avoid endless looping of call setup signaling to the SN (Fig. 4, Fig. 7, col. 9 lines 6-15, i.e., service code "non-loop" and destination address indicate call setup has occurred in the IP "SN");

receiving the second request at the switch (Fig. 4, 110, col. 9 lines 11-13);

responsive to the second request, sending, from the switch (Fig. 4, 110) to the SCP (Fig. 4, 124), a second query seeking call processing guidance, the second query including the non-loop parameter (col. 9 lines 1—22);

detecting the non-loop parameter in the second query at the SCP (Fig. 4, 124), and responsively sending, from the SCP (Fig. 4, 124) to the switch (Fig. 4, 110), a directive to set up the call to the subscriber station rather than to the SN (Fig. 4, 120); and receiving the directive at the switch and responsively setting up the call to the subscriber station (Fig. 4, 102, col. 47-50).



Regarding claim 21, McConnell teaches a system (Fig. 4) for setting up a telephone call (Fig. 4, 102, 144) comprising:

a switch (Fig. 4, 110 MSC) for receiving a first request to set up the telephone call from a calling number (Fig. 4, 102) to a called number (Fig. 4, 144) of a subscriber station (Fig. 4, col. 8 lines 60-62);

a service control point (SCP) (Fig. 4, 124 SCP) coupled with the switch (Fig. 4, 110), the SCP comprising service logic (Fig. 5, 124, 230 BASE SERVICE LOGIC) for providing call processing guidance to the switch (Fig. 6, 110, 202 MSC Switching Logic, i.e., guidance via STP 116, col. 8 lines 64-67, and col. 9 lines 1-5); and

a service node (SN) (Fig. 4, 120, service node or "IP", col. 11 lines 12-15) coupled with the switch (Fig. 4, 110, col. 11 lines 12-15) for providing one or more telecommunication services to the subscriber station, the SN comprising service logic (Fig. 4, 120, and Fig. 10, 120) for generating and sending a second request to the switch to set up the call to the subscriber station (col. 9 lines 19-22, i.e., sends IAM (Initial Address Message) message to the switch), the service logic including instructions for including in the second request (i) the calling number, (ii) the called number, and (iii) a non-loop parameter (Fig. 7, col. 3 lines 25-28, i.e., IAM message provides calling number, called number and other parameters "non-loop or service code") to indicate that call setup signaling has already occurred to the SN and thus to help avoid endless looping of call setup signaling to the SN (Fig. 4, Fig. 7, col. 9 lines 6-15, i.e., service code "non-loop" and destination address indicate call setup has occurred in the IP "SN"),

wherein the service logic of the SCP (Fig. 5, 124, 230) comprises instructions for recognizing the non-loop parameter in the second request and further instructions for responsively providing guidance to the switch to set up the call to the subscriber station rather than again to the SN (Fig.4, col. 9 lines 47-50).

Regarding claim 22, McConnell teaches the system (Fig. 4) further comprising a signal transfer point (STP) (Fig. 4, 116 STP), wherein the switch (Fig. 4, 110 MSC) and the SCP (Fig. 4, 124 SCP) are coupled via the STP (Fig. 4, 126, 114), and the switch and the SN (Fig. 4, 120 service node or "IP") are also coupled via the STP (Fig. 4, 114, 122, col. 11 lines 22-36).

Regarding claim 23, McConnell teaches the system wherein the SCP (Fig. 4, 124) is coupled with the STP (Fig. 4, 116) via a Signaling System 7 (SS7) communication link (Fig. 4, 126) (Figs. 1-4, col. 2 lines 31-43).

Regarding claim 24, McConnell teaches the system, wherein the SS7 communication link is an SS7 over Internet Protocol link (Fig. 4, 128, col. 11 lines 45-50, i.e., SR-3511 is a TCP/IP based protocol).

Regarding claim 25, McConnell teaches the system, wherein the switch (Fig.4, 110) is coupled with the SN (Fig. 4, 120) via a voice services trunk connection (Fig. 4, 118, col. 11 lines 12-14, i.e., a voice/data link).

***Claim Rejections - 35 USC § 103***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over McConnell as applied to claims 1 and 14 above, and further in view of Naim et al. (U.S. Patent Number 7,263,354 hereinafter "Naim").

Regarding claims 3 and 16, McConnell discloses everything claimed as applied above (see claims 1 and 14). However, McConnell does not specifically disclose the ring-back tone processing logic. Although McConnell teaches to respond with an Address Complete Message (ACM) which may be a signaling packet equivalent to a ring-back tone (McConnell - Fig. 9 (part B) col. 22 lines 27-29)

In the same field of endeavor, Naim teaches the system and method to provide a pre-paid billing system in the voice and data communication networks (Naim – Figs. 1-3a, col. 3 lines 57-67), and the pre-paid billing services (Naim - Fig. 19, 122 Pre-paid billing, 104 MSC, 108 SCP and 118 PSTN, col. 14 lines 58-60) applying the ring-back tone processing logic (Naim - Fig. 19, 666, col. 15 lines 10-16). The advantage of Naim is the hybrid MSC with the above feature can be implemented with soft switch technology (Naim – col. 15 lines 65-67, col. 16 lines 1-5).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify McConnell's system and method with the ring-back processing logic, as taught by Naim, in order to enhance the pre-paid services.

7. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over McConnell as applied to claim 1 above, and further in view of Foti (U.S. Patent Number 6,963,583).

Regarding claims 9-10, McConnell discloses everything claimed as applied above (see claims 1). However, McConnell does not specifically include the well known in the art Session Initiation Protocol (SIP – the most common protocol for VoIP), and specifically about the SIP INVITE is mapped to a SS7 message in accordance to WIN IS-771 standard. Although McConnell teaches many protocol standards (SS7, TCAP, ISUP, etc.) and equipment that the telecommunications industry has been used to

communicate over their networks (McConnell – Figs. 1-4, col. 2 lines 25-52, col. 3 lines 8-22).

In the same field of endeavor, Foti teaches the detail mapping of all the different signaling protocols (Foti – Figs. 1-6, col. 1 lines 16-26, i.e., SIP, Mobile Application Part (MAP), ANSI-41 (i.e., IS-771), col. 9, i.e., Mapping Table (TABLE. 1)), and SIP INVITE message is mapping to SS7 and WIN protocol (Foti – col. 5 lines 3-5, and lines 13-19, also Fig. 6 Message Flow Diagram, col. 8 lines 27-30). The advantage of Foti is the generic call server and method for the protocol converting between all of the different signaling protocols (Foti – col. 3 lines 10-18).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide Donovan et al. with the mapping of the SIP to the SS7 protocols, in order to enhance the call setup.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

3GPP2 - TIA/EIA-41-D Enhancements for Internationalization, January 18, 2000, pages 38 and 71.

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khai N. Nguyen whose telephone number is (571) 270-3141. The examiner can normally be reached on Monday - Thursday 6:30AM - 5:00PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad F. Matar can be reached on (571) 272-7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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KNN  
01/29/2008

  
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